

Massachusetts Institute of Technology  
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Cambridge, Massachusetts

LUMINARY Memo #75

TO: Distribution  
FROM: George W. Cherry  
DATE: April 1, 1969  
SUBJECT: R-2 Lunar Potential Model Added to LUMINARY

We were directed by MSC on 1 April 1969 to release a new LUMINARY (Rev. 69) module containing the Boeing R-2 lunar potential model. The name of the new program is LUM69 (Rev. 2).

Mission "F" Level 6 testing should be based on the new module.

A similar change has been directed in COLOSSUS 2.

I have also just received from Jim McPherson a new set of covariance matrices for ground updates of the F Mission based on two-pass data arc processing with the R-2 model. Gene Muller and I decided we ought to use this data when we are re-running the Level 6 tests because of the on-board R-2 model. The two-pass solutions offer quite an improvement in the downtrack position because of the increased accuracy in determining the orbital period.

I have given the new covariance matrices to Gene who will generate the new error vectors.